

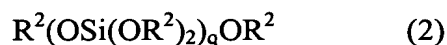
REMARKS

Claims 4-5 and 22 are cancelled. Claim 24 is new. Support for Claim 24 is found in originally presented Claim 4, which contains similar embodiments therein. Further, Applicants have amended Claim 1 to include similar embodiments of Claims 5 and 22. Accordingly, support for the amendment is found in claims 5 and 22. Claims 1-3, 6-21, and 23-24 are pending. Favorable consideration is respectfully requested.

At the outset, Applicants thank Examiner Nolan for the helpful comments during the courteous discussions of the present application, which are summarized and expanded upon below. Further, Applicants thank Examiner Nolan for indicating that the above amendment, combined with the remarks below, appear to further favorable prosecution of the present application.

The rejections of the claims under 35 U.S.C. § 103(a) over any of one of Hanson, Morishima and/or Terakawa alone or in any combination thereof is believed to be obviated by the above amendment combined with the remarks below.

The claimed invention relates to a coating agent that containing compounds represented by the following general formulae (1), (2) and (3):



where compound (1) has the polymerizable organic group R^1 having an unsaturated double bond or a ring-opening cyclic group.

Hanson, at best, teaches coating compositions containing a compound of the formula

* $R_x Si(OR')_{4-x}$ wherein R may be vinyl, γ -glycidoxypopyl or γ -methacryloxypropyl.

→ However, Hanson defines R as "an organic radical". In fact, Hanson also exemplifies, as the group R, alkyl, methoxyethyl, and phenyl, which are not polymerizable, and does not

describe a polymerization reaction of the group R. Thus, it is clear that Hanson does not suggest the importance of the polymerizable group.

Furthermore, Hanson does not teach the combination of compound; (1), (2) and (3).

In the Examples, although the combinations of only one silane compound and a titanium compound are disclosed, the combination of a compound having a polymerizable group (compound (1)), a compound having no polymerizable group (compound (2)), and a metal compound (compound (3)) is never disclosed. The interaction between compounds (1) and (2) is important (see page 6, lines 31 to 34). Hanson does not suggest the effect of the interaction. Still further, Hanson et al. is concerned with a coating for semiconductors and light bulbs, respectively, which require water.

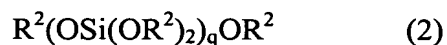
Morishima, at best, teaches a coating fluid comprising a reaction product obtained by subjecting (A) an alkoxysilane or aryloxysilane and (B) a metal alkoxide or aryloxide to hydrolysis and condensation reaction. The hydrolysis and condensation reaction require a catalyst. The polymerization reaction in the present invention is achieved without catalyst owing to polymerizable compound (1) which is not disclosed by Morishima. Furthermore, the present invention has realized a lower polymerization temperature (30 to 600°C: see page 19, lines 7 to 9) than Morishima (400 to 1800 °C: see column 3, lines 11 to 17). Morishima does not suggest the combination of three compounds defined in the present invention as well as the effect of the combination. Still further, Morishima et al. is concerned with a coating for semiconductors and light bulbs, respectively, which require water.

Terakawa, at best, discloses a correction fluid. The Office stated that correction fluids are coatings. To the contrary, a correction fluid is very different from the present invention in technical field. The coating for glass achieved by the present invention requires various characteristics, for example, hardness, smoothness, clearness, high adhesion to glass, and so on, which are completely different from those of the correction fluid. Curing conditions are

also different. Furthermore, the present invention relates to "a glassy-film-forming coating agent". The correction fluid of Takekawa cannot produce a glassy film. Moreover, Terakawa is concerned with a correction fluid used for anti-settling agent, viscosity modifier, polymerization inhibitor, anti-skinning agent, coloring pigment, and the like (see column 5, line 31-36) which requires the absence of water (see column 5, lines 42-60).

It is clear that none of the above-mentioned cited references disclose or suggest the claimed invention. Further, Terakawa is concerned with a correction fluid used for anti-settling agent, viscosity modifier, polymerization inhibitor, anti-skinning agent, coloring pigment, and the like (see column 5, line 31-36) which requires the absence of water (see column 5, lines 42-60), while the disclosure of both Morishima et al. and Hanson et al. are concerned with a coating for semiconductors and light bulbs, respectively, which require water. Accordingly, there is no motivation to combine the references relied upon because they actually teach away from modifying that disclosed by Morishima et al. and Hanson et al. according to the disclosure of Terakawa because Terakawa teaches that water can not be present, while Morishima et al. and Hanson et al. teach that water must be present. Accordingly, no skilled artisan reading any of the cited art would be motivated to modify that disclosed by the other cited arts due to this express teaching away.

In light of the above, it is clear that none of Hanson, Morishima and/or Terakawa alone or in any combination thereof disclose or suggest a glassy-film-forming coating agent comprising compounds represented by the following general formulae (1), (2) and (3):



wherein

R^1 is a polymerizable organic group having an unsaturated double bond or a ring-opening cyclic group,

R^2 is an alkyl group having not more than 4 carbon atoms,

R^3 is an alkyl group having not more than 6 carbon atoms,

p is an integer of 1 to 3,

q is an integer of 1 to 10,

M is a trivalent or tetravalent metal ion, and

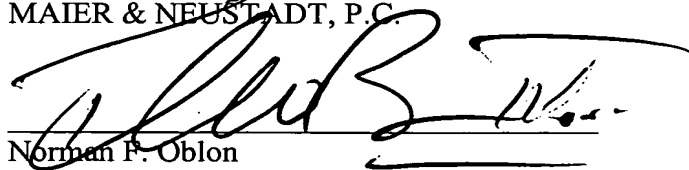
r is an integer of 3 or 4 corresponding to the valence of M,

provided that, when one of the compounds contains two or more R^1 s, R^2 s or R^3 s, they may be the same or different. Moreover, the references relied upon can not even be combined according to their own disclosures. Therefore, no combination of the references relied upon disclose or suggest the claimed invention.

Applicants respectfully submit that the present application is now in condition for allowance. Should anything further be required to place this application in condition for allowance, the Examiner is requested to contact the Applicants' attorney by telephone.

Respectfully submitted,

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